

What Is Claimed Is:

1. A display control device which controls display of a display device responding to display  
5 processing from a plurality of processing units, comprising:

display area storage means for storing definitions of the plurality of display areas set in the display device; and

display area management means for judging whether use  
10 of the requested display area is allowed when a display area acquisition request is received from each processing unit.

2. The display control device according to Claim 1, wherein when display area acquisition requests are received  
15 from a plurality of processing units, the display area management means judges whether the display areas subject to respective acquisition requests can coexist, and if the plurality of processing units are requesting acquisition of display areas which cannot coexist, use is allowed to one of  
20 the processing units.

3. The display control device according to Claim 2, wherein when the plurality of display areas subject to respective acquisitions requests all or partially overlap, the  
25 display area management means judges as coexistence impossible.

4. The display control device according to Claim 2, wherein when a plurality of processing units request acquisition of one display area, the display area management means judges as coexistence impossible.

5

5. The display control device according to Claim 2, wherein when a plurality of display areas subject to respective acquisition requests partially overlap, the display area management means judges as coexistence possible.

10

6. The display control device according to Claim 5, wherein when a display processing is executed for a plurality of display areas which can coexist with partial overlapping portions, the display area management means displays assigning priority to a display area having a higher priority in said overlapping portion.

7. The display control device according to Claim 2, wherein the display area management means judges the possibility of coexistence based on the coexistence relationship information where the possibility of coexistence of a plurality of display areas has been defined in advance.

8. The display control device according to Claim 2, wherein when an acquisition request for a display area which cannot coexist is received, the display area management

means allows use to the processing unit which sent the request first.

9. The display control device according to Claim  
5 2, wherein when an acquisition request for a display area which cannot coexist is received, the display area management means allows use to the processing unit which has the highest priority.

10 10. The display control device according to Claim  
2, wherein an acquisition request for a display area which cannot coexist is received, the display area management means allows use to the processing unit which requests the area having the highest priority.

15 11. The display control device according to Claim  
2, wherein the display area management means stores a processing unit which requested acquisition but was not allowed use of the display area as an acquisition waiting, and  
20 allows use of said display area when allowance is possible.

12. The display control device according to Claim  
11, wherein when there are a plurality of processing units waiting for acquisition, the display area management means  
25 allows use considering the order of receiving the acquisition requests.

13. The display control device according to Claim 11, wherein when there are a plurality of processing units waiting for an acquisition, the display area management means  
5 allows use considering the priority assigned to each processing unit.

14. The display control device according to Claim 11, wherein when there are a plurality of processing units  
10 waiting for an acquisition, the display area management means allows use considering the priority assigned to display areas requested by each processing unit.

15. The display control device according to Claim 2, wherein when a request for a display area which cannot  
15 coexist is received, the display area management means changes the display area requested by one or more processing units so as to allow use as a plurality of display areas which can coexist.

20

16. The display control device according to Claim 15, wherein when a request for a display area which cannot  
coexist is received, the display management means changes the display area based on dependency relationship information  
25 defining the changes of the display area to make coexistence possible.

17. The display control device according to Claim 1, further comprising acquisition right information storage means for defining processing units which are allowed use of each display area, wherein when a display area acquisition request is received from each processing unit, the display area management means refers to the acquisition right information and decides whether use of said display area is allowed to each processing unit.

10

18. The display control device according to Claim 17, wherein the display area management means does not allow two or more processing units simultaneous use of one display area.

15

19. The display control device according to Claim 17, wherein the display area management means allows two or more processing units simultaneous use of one display area.

20

20. The display control device according to Claim 19, wherein the display area management means allows use of one display area considering the upper limit of the number of processing units which can use the display area simultaneously.

25

21. The display control device according to Claim 17, wherein the acquisition right information stored in the

acquisition right information storage means defines the processing unit which can be used alone and the processing units which can be used simultaneously for one display area.

5           22.       The display control device according to Claim 1, wherein when the processing unit which requested the display area is actually not in a state to display on said display area or is not in a state to execute processing related to said display processing, the display area management means does not allow said processing unit to use  
10       said display area even if the display area requested by said processing unit can coexist with display areas requested by other processing units.

15           23.       The display control device according to Claim 22, wherein when the resource to be used by the processing unit which requested the display area cannot be used, the display area management means does not allow said processing unit use of said display area.

20           24.       The display control device according to Claim 1, further comprising display processing supervisory means, wherein when each processing unit executes display processing for each display area, it is supervised whether the display  
25       processing is by a processing unit which is allowed use of said display area.

25. The display control device according to Claim 24, wherein the display area management means assigns a key to the processing unit when use of the display area is allowed, 5 the processing unit shows said key to the display processing supervisory means when the display processing is executed for said display area, and the display processing supervisory means supervises by judging whether the key shown by the processing unit is the correct key assigned by the display 10 area management means.

26. The display control device according to Claim 25, wherein the display area management means assigns a different key to every assignment. 15

27. The display control device according to Claim 24, wherein when a processing unit attempted to execute display processing for a display area which is not allowed use is discovered, the display processing supervisory means 20 executes processing to disable the display processing by said processing unit.

28. A display control device, which controls display in a display device responding to display instructions 25 from a plurality of processing units, comprising:

display area storage means for storing defined display

areas;

acquisition status storage means for storing  
correspondence between a display area defined in the display  
area storage means and processing units which acquired said  
5 display area; and

display area management means wherein when a display  
area acquisition request is received from a processing unit  
which executes display processing and when the requested  
display area has not been acquired by processing units other  
10 than said processing unit, said processing unit which  
requested the display area acquisition is stored in the  
acquisition status storage means.

29. A display control device which controls  
15 display of a display device responding to display processing  
from a plurality of processing units, comprising:

a processor connected to the display device; and

a memory connected to the processor where a display  
control program is stored, wherein when an acquisition request  
20 for a display area on the display device is received from each  
processing unit, said display control program instructs said  
processor to execute control to decide whether use of the  
requested display area is to be allowed.

25 30. The display control device according to Claim  
29, wherein when display area acquisition requests are



received from a plurality of processing units, said display control program judges whether the display areas subject to respective acquisition requests can coexist, and if the plurality of processing units are requesting acquisition of display areas which cannot coexist, use is allowed to one of the processing units.

31. The display control device according to Claim 30, wherein when an acquisition request for a display area which cannot coexist is received, the display control program changes the display area requested by one or more processing units so as to allow use as a plurality of display areas which can coexist.

32. The display control device according to Claim 29, wherein the processing unit which requested acquisition but was not allowed use of said display area is stored as an acquisition waiting, and is allowed use of said display area when allowance becomes possible.

33. The display control device according to Claim 29, wherein processing units which are allowed use are defined for each display area in advance, and when a display area acquisition request is received from each processing unit, whether use of said display area is allowed is decided for each processing unit.

34. A recording medium recording a display control program for a computer having a display device to control display by a plurality of processing units, whereby  
5 the computer executes control for deciding whether use of the requested display area is allowed when an acquisition request for a display area on the display device is received.

35. The recording medium recording the display  
10 control program according to Claim 34, wherein when display area acquisition requests are received from the plurality of processing units, the display control program judges whether the display area subject to respective acquisition requests can coexist, and if the plurality of processing units are  
15 requesting acquisition of display areas which cannot coexist, use is allowed to one of the processing units.

36. The recording medium recording the display control program according to Claim 35, wherein when an  
20 acquisition request for a display area which cannot coexist is received, the display control program changes the display area requested by one or more processing units so as to allow use as a plurality of display areas which can coexist.

25 37. The recording medium recording the display control program according to Claim 35, wherein the display

control program stores the processing unit which requested acquisition but was not allowed use of said display area as an acquisition waiting and allows use of said display area when allowance becomes possible.

5

38. The recording medium recording of the display control program according to Claim 34, wherein when a display area acquisition request is received from each processing unit, the display control program decides whether use of said display area is allowed to each processing unit based on the usability information for the processing units defined for each display area.

39. A device having a display device which selects a plurality of predetermined display areas according to the processing content and executes display on at least one display area, wherein said device having a display device has a total display area which uses the entire screen of the display device and partial display areas which use divided parts of the screen of the display device as said display areas, where there are a plurality of display areas which are used simultaneously, and a plurality of display areas which are not used simultaneously.

40. A display control method for controlling display on a display device by each processing unit when

display instructions are received from a plurality of processing units, comprising steps of defining a plurality of display areas on the display device, and deciding whether the requested display area can allow use when a display area acquisition request is received from each processing unit, so that only the processing unit for which use is allowed can display on said display area.